

WHAT IS CLAIMED IS:

1. A fluid pressure regulator comprising:

a tubular housing having a fluid inlet at one end thereof and a fluid outlet at an opposite end and a fluid passage therebetween;

tubular plunger mounted for reciprocal movement in said fluid passage, said plunger having a flow control end and a piston end;

a seat in said fluid passage including a seating surface located axially upstream of said plunger and adapted to be approached or engaged by a lower edge of said flow control end of said plunger, said seat supported centrally within said fluid passage by a single radially-oriented strut.

2. The fluid pressure regulator of claim 1 wherein said seating surface is surrounded by an upstanding peripheral flange.

3. The fluid pressure regulator of claim 1 wherein said piston end has a piston surface and a flexible diaphragm extending radially between said piston surface and said housing.

4. The fluid pressure regulator of claim 1 wherein said seat is comprised of a material with a flexural modulus of at least 1.8 Msi.

5. The fluid pressure regulator of claim 4 wherein said material comprises a glass fiber reinforced polyphenylene sulfide alloy.

6. The fluid pressure regulator of claim 1 wherein said single radially-oriented strut connects to an underside of said seat.

7. The fluid pressure regulator of claim 1 wherein said single, radially-oriented strut has a rounded V-shaped underside.

8. The fluid pressure regulator of claim 1 wherein said single, radially-oriented strut is formed with an underside that slopes in a downstream direction from a radially outer end thereof to a radially inner end thereof.

9. The valve seat of claim 1 wherein said annular support ring has a flat top surface with an annular rib formed thereon.

10. A valve seat for a valve or pressure regulator comprising an annular support ring defining a central flow opening and a disc having a seating surface supported concentrically within said center opening by a single radially-oriented strut.

11. The valve seat of claim 10 wherein said seating surface is surrounded by an upstanding peripheral flange.

12. The valve seat of claim 10 wherein said annular support ring has a flat top surface with an annular rib formed thereon.

13. The valve seat of claim 12 wherein said single radially-oriented strut connects to an underside of said seat.

14. The valve seat of claim 10 wherein said valve seat is comprised of a material having a flexural modulus of at least 1.8 Msi.

15. The valve seat of claim 14 wherein said material comprises a glass fiber reinforced polyphenylene sulfide alloy.

16. The valve seat of claim 10 wherein said single radially-oriented strut connects to an underside of said seat.

17. The valve seat of claim 16 wherein said single, radially-oriented strut has a rounded V-shaped underside.

18. The valve seat of claim 16 wherein said single, radially-oriented strut is formed with an underside that slopes in a downstream direction from a radially outer end thereof to a radially inner end thereof.

19. A valve seat for a valve or pressure regulator comprising an annular support ring defining a central flow opening and a disc having a seating surface supported concentrically within said center opening by a single radial strut connected to an underside of said

disc; wherein said seating surface is surrounded by an upstanding peripheral flange; and further wherein said underside of said strut is formed with an underside that slopes in a downstream direction from a radially outer end thereof to a radially inner end thereof.